Project
Stage 1. Proposal

Due date: Thursday, October 4, in class

Project Proposal

The first stage of the course project is the proposal. Each group shall, in consultation with all its members and the instructor, select the topic of the course project, and write a project proposal — a document specifying the problem and the proposed solution.

Deliverables and submission instructions

Each group has to submit two deliverables: the project proposal document and the proposal presentation.

Project proposal. The project proposal shall include the following information:

1. Name of the project (title);
2. Names of all people in the group (authors);
3. Abstract: a one-paragraph description of the proposed project.
4. Introduction: a slight extension of the abstract, describing the proposed project, the needs it addresses, the technologies to be involved and the structure of the rest of the proposal.
5. Problem statement: brief, but precise (formal) description of the problem.

6. Proposed solution: brief description of the proposed solution. If you propose to build software - describe what it will address, what its archetecture would be. If you propose to develop algorithms, describe their purpose. Outline any testing procedures to be performed. If you are building an application for a specific purpose, explain the sources of the data.

7. Bibliography: all external information must be properly cited and attributed in your proposal. Please provide full citations for any sources used.

The proposal should be submitted in electronic copy on the due date. The hardcopy should be submitted during the classtime on the due date. It might be a good idea to bring extra hardcopies, to give to other groups.

There is no strict upper or lower limit on the size of the proposal. It should be succinct: you will have a chance to expand it throughout the course. At the same time, all necessary information should be presented. My estimate is that proposals will range from 4 to 10 pages in standard MS Word format.

Proposal presenation. On the due date, each group will get 7-15 minutes to present their proposed work to the entire class. The presentation should be accompanied by some displayed materials (e.g., powerpoint slides, although each group is welcome to decide what to present). These should be submitted to the instructor prior to classtime, to ensure their placement on the instructor's laptop.

Each group is welcome to choose the presentation format - either use a designated presenter, or do it as a team, etc.

Following the completion of all group presentations, we will hold a general discussion of the proposed projects.

Note: One way to submit your electronic materials - in fact, the preferred way, is to put them up on the group's web page and email me a note stating that the specific material(s) are now available.

Projects

As stated in class, there are basically two broad categories of projects available to you.

Application-oriented projects involve building a database application to support storage and retrieval of XML data for a specific purpose. Such applications will use existing XML support in an RDBMS, or an existing native XML DBMS as the backend. The implementation for such projects must concentrate on the front end of the application: delivery of information to the database, query interfaces, query preparation (writing the correct XPath/XQuery code), and visualization of the results.

Research-oriented projects involve building software, tools, algorithms and/or techniques that concentrate on support for XML data management - typically *native* XML data management. Projects in this category include, but are not limited to, design and/or development/implementation of native XML indexing techniques, implementation of XPath/XQuery query processors, or processors for suitable subsets, design and implementation of XML support in RDBMS using special-purpose shredding techniques, and more. The projects in these category should also involve validation mechanisms – i.e. ways to experimentally assess the obtained results.

Consultations

Each group has two basic options when designing the project: approach me for a specific task, or propose a specific task to me and negotiate the details.

Consulting me for project ideas. I have a number of project topics in mind, which I can suggest if/when asked. I can offer such ideas for both **application-oriented** and **research-oriented** projects. If you want ask me for project ideas, I recommend the following procedure:

- Conduct a group meeting, determine group's priorities as far as the project direction is concerned.
- Schedule a meeting with me - preferably for the entire group. Either come to my office hours, or schedule a meeting outside office hours.
- Present me with your general thoughts and priorities at the meeting, listen to suggested topics.
- conduct a group meeting, select a topic from the list of proposed, or pick a topic by yourselves.
- have group coordinator meet me briefly to get the project topic/scope OK'd.

Consulting me with project ideas. If your group has project topic ideas of its own, I suggest slightly inverting the procedure:

- Conduct a group meeting, determine priorities, and possible project ideas.
- For each project idea prepare a short writeup (one paragraph long).
- Schedule a meeting of the group coordinator with me.
- At the meeting, have the group coordinator present the ideas, recieve my feedback.
- Conduct group meeting, finalize topic and scope.

- Have group coordinator, or the entire group meet me to negotiate the final aspects of the project.

This is a rather tight schedule, so I suggest you start organizing early. I want to meet with each group/coordinator before the end of the week, if possible.